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ABSTRACT

Different structural, organizational, and managerial options greatly influence the role of evaluation. Evaluation serves different functions in organizations of higher and lower autonomy and likewise in progressive and reactive organizations. The role of the evaluator in the organizational hierarchy was dictated by the type of organization. In high autonomy, progressive organizations the evaluator was far removed from those on the production level. In low autonomy, reactionary organizations, the evaluators at times were the same individuals as those on the production level. Such organizational and managerial options had considerable influence on the resultant role and impact of evaluation in a given development effort. (Author/SM)

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INFLUENCE OF ALTERNATIVE STRUCTURAL, ORGANIZATIONAL AND MANAGERIAL OPTIONS ON THE ROLE OF EVALUATION

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Introduction

Even before discussing a topic such as "Influence of Alternative Structural, Organizational and Managerial Options on the Role of Evaluation," one has made several tacit assumptions. The more important of such assumptions are these three:

1. The role of evaluation is in fact dependent on alternative structural, organizational and managerial options. In other words, the nature of evaluation in an educational research and development (R & D) agency will differ from agency to agency--and overtime, within any given agency--as a consequence of the manner in which the agency is managed and organized.
2. Some roles of evaluation are more appropriate than others depending on the types of agencies in which evaluation performs a role. Were they not, it would make little sense to discuss the managerial options which influence the role of evaluation.
3. Because inappropriate roles for evaluation in an educational R & D agency can be inefficient at the least and, at most, dysfunctional, it is worthwhile to constructively worry about the appropriate role of evaluation.

These assumptions serve as both background to this discussion and as the quasi-logical premises on which it is based. In brief recap: it is assumed/argued that the role of evaluation will vary as a consequence of such things as the management options of the R & D agency in which it operates; that it will vary in some ways which are more appropriate than others; and that because inappropriate evaluation roles are (at least) inefficient, it is worthwhile to examine some of the things which influence the role of evaluation.

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Definitions

A title as long and cumbersome as that given to this paper demands that some definitions be set forth and that the relationships among the defined concepts be given some kind of order. The concepts most in need of definition are these: Management, Organization, Structure, and Evaluation. Both the following definitions, and later, the logic constructed to give order to them, have been developed arbitrarily--yet hopefully, consistently--in order to adapt them to the context of this discussion (e.g., educational settings, R & D agencies, evaluation roles, etc.).

Management: As a function of an R & D agency,* management refers to the set of actors and activities which establish and maintain the overall purpose and strategy for the agency.

Organization: The means or process by which an agency chooses to arrange itself to achieve its purposes. The most apparent evidence of an agency's organization is its structure.

Structure: Structure is the formal pattern of authority and responsibility assigned to the roles within an agency as well as relationships among those roles. An agency's structure is most often and clearly depicted in its "organizational" chart.

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* Throughout the paper, "agency" refers to an educational R & D agency--which itself is probably best defined as any group of individuals which have organized itself in a manner legally entitling it to receive and expend monies for the stated purpose of doing educational R & D.

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Evaluation: Evaluation is defined here as those processes which permit an agency to determine the extent to which any of its purposes are being (or have been) achieved.

Relationship Among Concepts

Given these definitions, it is important to describe the relationships among the defined concepts. The single most important determinant of the overall organization, structure and role of evaluation within an agency are the management "options""which determine: (1) its commitment to educational change and (2) the degree of autonomy with which it is able to seek its purposes.

"Options" is actually a misnomer because of the incorrect implication that the purposes and strategies which result from an agency's management process are made by the design of the "managers." The point is that whether by design or default, the function of management results in decisions which determine the agency's commitment to educational change and to its autonomy.

Thus, while it is recognized that a host of ill-defined and shifting choices and circumstances act as influences on these management decisions, it is the purpose of this discussion to explore their organizational, structural and evaluative consequences, not their many and varied antecedents. The premise on which the remainder of the paper is based is that the agency's commitment to educational change and relative autonomy represent the most important of all possible management choices of purpose and strategy. The chain of influence can be depicted as on the following page.

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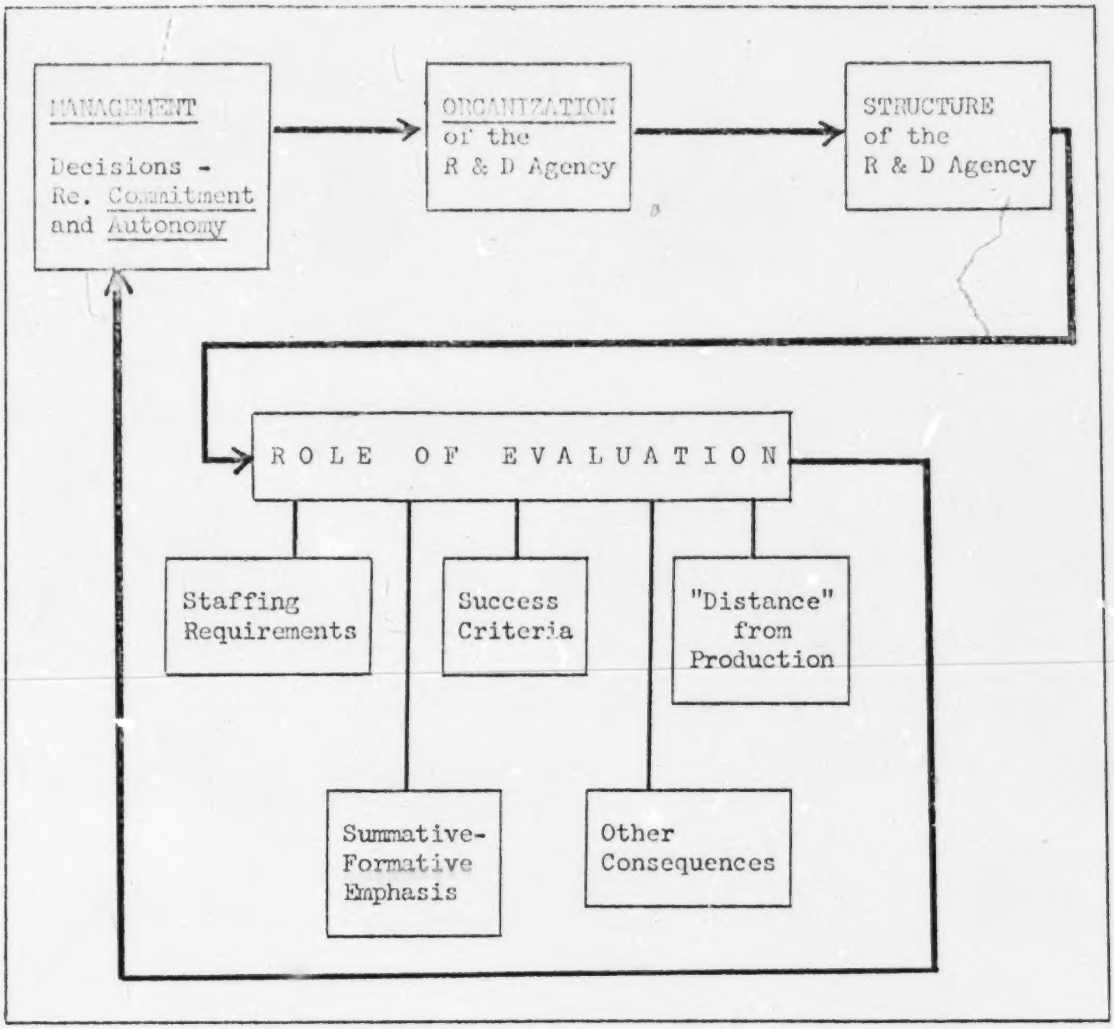

The rationale for selecting "commitment" and "autonomy" as the two conditions most predictive of what and how an R & D agency is and is likely to be doing is simply that these two conditions, more than any others, mirror such things about the agency as its philosophy, leadership, staffing, funding patterns, constituencies, sponsors, maturity and history.

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Autonomy and Commitment: Classifications and Consequences

Autonomy is defined as the degree to which an R & D agency has the ability to determine its own future. Commitment to Education Change is defined as the extent to which the R & D agency is willing to alter the status quo in order to bring about what it defines as educational improvements. Thus, with the understanding that myrial conditions are antecedent to an agency's "choices" on Autonomy and Commitment dimensions, and with the further understanding that each is complex and continuous in quantity and quality, the classification presented below (see Figure 1) represents an arbitrarily simplified model of these two dimensions.

Figure 1

A Classification of Educational R & D Agencies According to Commitment to Educational Change and Degree of Autonomy

Autonomy \ Commitment to Educational Change	Low or Reactive	High or Proactive
Low or Cautious	1 Cautiously Reactive	3 Cautiously Proactive
High or Aggressive	2 Aggressively Reactive	4 Aggressively Proactive

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This classification will serve as the basis for portraying each of the four "types" of R & D agencies. Each type will be described in terms of possible organizational and structural characteristics, and--most importantly here--in terms of the different roles evaluation would play in each type of agency. A final caution before continuing an examination of these consequences; it is evident that:

- R & D agencies cannot be categorized neatly into these four types.
- The "high-low" dichotomies are conveniences, not realities.
- The relationship between "autonomy" and "commitment" may well be interactive.
- Even if classifiable into one of these four types, an R & D agency would very likely change over time from one to the other.*

Caveats aside, we can turn now to an examination of possible consequences on an agency's organization, structure and evaluation roles. Figure 2 provides an overview of the principal consequences of each type of agency.

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* A study of the "life cycle" of an R & D agency across these four ideal types would be interesting. One might hypothesize that the cycle would move from "1" consecutively to "4" as a consequent of increasing confidence and "success" at each type. Incidents of the "bubble bursting" resulting in a movement from "4" to "1" might also be found

Figure 2

An Overview of Selected Organizational, Structural, and Evaluative Consequences of Different Types of Educational R & D Agencies

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Type of R & D Agency	Organizational and Structural Characteristics	Role of Evaluation: Success Criteria	Role of Evaluation: Summative-Formative Emphasis	Staffing Requirements	Distance from Production	Other Consequences
CATEGORICALLY REACTIVE	- Typical product is a client-identified remedial tool for immediate problems (often some in form of kits and packages) - Low risk and low leverage strategy - "Flat" organizational structure - Proportionately large business and "manufacturing" units - High staff turnover; many part-time employees - Many small contracts--no grants - Management personnel from private business - Development time is very short - No paradigm for change or development	- High volume of clients. - Low number of complaints - High cash flow - Multiple products; high visibility - Efficiency of product development	Summative: - Auditable fiscal data - Some anecdotal descriptions of products - Progress reports Formative: - Delineating client specifications - Manufacturing-type of process evaluation (schedule-cost) - Packaging data - Cost-efficiency data	- Accountants - Historians - Educational generalists - Market analysts - Technical and popular writers	- Minimum distance required - Problems of co-optation or poor credibility are unlikely - Little evaluation authority/responsibility beyond fiscal data	- Not much worrying about evaluation other than fiscal or packaging concerns - Possibility of "window-dressing/PR" evaluation - Any rigorous evaluation is reactive to sponsor demands
ADAPTIVELY REACTIVE	- Typical product is selected by client from among agency's "stock" of products (e.g., multi-unit kits) - Moderate risk; low leverage - No change paradigm - Some degree of hierarchial organizational patterns - Many small contracts; no grants	- High client volume - Customer satisfaction (testimonials) - Repeat business - Efficiency of developing multi-unit products	Summative: - Fiscal data - Informal historical chronicles - Some progress reports Formative: - Some needs assessment (client identified) - Logs, anecdotal product development records - Some follow-up	- Accountants - Educational salespersons - Market analysts - Evaluation generalists - Needs assessment specialists	- Minimum distance required	- Cost efficiency important, thus some attention to market/needs assessment prior to product development is likely
CATEGORICALLY PROACTIVE	- Typical product is identified with clients but final decisions are the agencies - Paradigm guides product identification and development - Moderate to high risk; moderate leverage - Several moderate sized contracts	- Intermediate behavioral changes (short range) - Satisfaction/testimonials - Product effectiveness	Summative: - Fiscal data - Accountability data (needs, design, development and test results) Formative: - Needs assessments - Cost-effectiveness data - Transportability data - Generalizability data - Effectiveness data	- Evaluation specialists - Content specialists - Psychometrists - Itemetricians - Market analysts	- Maximum distance required - High likelihood of credibility and co-optation problems	- Emphasis on criterion-referenced testing in search of success approximations - Progress reports to sponsors will include lots of test data
ADAPTIVELY PROACTIVE	- Typical product derives from macro-systems analysis (in which client needs are but one variable) - Macro change and R & D paradigm guides all activities - Parallel organizational structure - Moderate risk; high leverage - High specialization - Long term, programmatic R & D	- Ultimate behavioral changes (long range) - Testimonials (secondary emphasis) - Positive secondary consequences - Systemic changes - Product effectiveness	Summative: - Auditable log of all major decision points Formative: - Extensive context (needs assessment) data - Several cycles of feasibility testing - Multi-year field testing - Comparative product evaluation	- Context evaluation specialists - General systems theorists - Educational change theorists - Psychometrists - Formative specialists - Behavioral scientists	- Maximum distance required - Evaluation function at least equivalent to production in authority and responsibility	- "Healthy tension" likely between evaluators and product staff - Occasional need to provide appeasement data to sponsor but as means for continuance, not evidence of success as defined by agency.

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The Cautious Reactive Agency: This type of R & D agency must operate on a low risk, high volume and (therefore) low leverage basis. Risk is the probability of failure, and failure for the cautious reactive agency is represented by a drop in "sales." Thus "customer satisfaction" becomes the principal success criterion and because the educational needs emanate from status quo activities, the likelihood of high leverage products is very low. (High leverage products are those interventions which are likely to result in a high level of positive change through ripple effects via intermediate audiences or generalizability.) The paradigm for this agency is a marketing-sales model. A comprehensive paradigm of social change and programmatic R & D would not meet its purposes because those purposes center on meeting the daily needs as expressed by clients regardless of the logic, validity or change potential inherent in the symptoms described by the client. This agency is likely to be motivated by profit and/or size as it would be expressed in numbers of staff, volume of sales, and so forth. Its core functions, and in the general sequence as stated, would be those of advertising, selling, manufacturing and delivery. Its business office and sales force would represent its largest organizational units. Quite likely, the sales-manufacturing functions could be performed by the same individuals. Overall, the Cautious Reactive agency will develop and sell whatever products have been expressed to them as needs by clients. It must operate on high volume and fast turnaround. There is little time or inclination for any evaluation other than that necessary to appease sponsors and clients.

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Summative evaluation is limited largely to fiscal data and to data reflecting sales and volume. The products from the Cautious Reactive agency will be limited mostly to large numbers of materials for learners or teachers. Because there is little desire to follow-up or in anyway determine the utility of these materials, the need for formative evaluation is limited to selective historical accounts of the development process which will embellish the packaging of the products. Formative management information needs are met by providing data about costs and schedules.

The staffing requirements for evaluation are minimal. It may well be that no staff members perform an identifiable role of evaluation. The evaluation functions center on the required fiscal, packaging and scheduling data.

The concept of "distance" is important to each type of agency. Distance refers to the extent to which an evaluation function should be structurally separate from the agencies production function. The rationale for distance considerations center on the problems of co-optation, role conflict and lack of credibility. Distance is maintained by providing a structure which assigns different levels of authority and responsibility to the evaluation function vis a vis the production function. The abbreviated model depicted in Figure 3 represents examples of different levels of distance.

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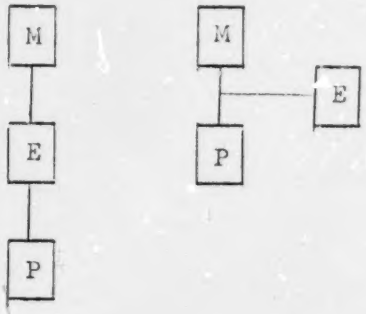
Figure 3

A Representative of Low, Moderate, and High Levels of Distance between Evaluation and Production Functions

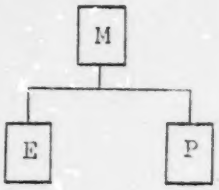
Models*

Level of Distance

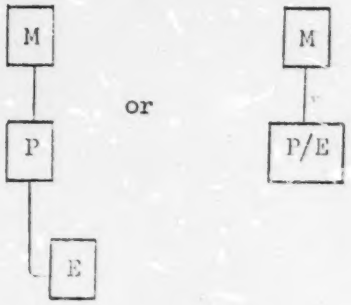
High



Moderate



Low



* Key: M: Management Function/Unit
E: Evaluation Function/Unit
P: Production Function/Unit

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With each higher level of distance, the amount of responsibility and authority allocated to the evaluation unit increase as problems of co-optation, role conflict and lack of credibility decrease. The need for distance is a consequence of such conditions as:

- Product objectives which purport to demonstrably alter (improve) a given state of affairs in some educational setting.
- Agencies with large teams of product developers working on multi-year efforts.
- Managerial choices which require that products be tested and proven prior to dissemination.
- Sponsor/client demands that products meet measurable specifications.
- Agency commitments to widespread educational improvements.

Thus, for the Cautious Reactive agency, there is little need for distance between the functions of evaluation and development. The evaluators (if they exist) could easily be assimilated into the production/sales teams in this type of agency.

The Aggressive Reactive R & D Agency: This type of agency differs from the Cautious Reactive agency primarily in the confidence it has in being able to market its products. It may well have matured into its current mode from its former style as a Cautious Reactive agency. Some hierarchy is necessary for its organizational structure and the interface between its "sales force" and production units is important. Its risks are slightly higher than the Cautious Reactive agency because it stockpiles products which must then be sold. Overall, however, both risk and leverage are low. No paradigm of educational/social change governs this agency. More attention is given to needs assessment than

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than in the Cautious Reactive agency because a reasonable probability must exist that the product will be salable once developed. For this same reason, some degree of follow-up evaluation may occur for the purposes of reconfirming prior hunches about marketability, or to a lesser extent, to make revisions on existing products. In neither of the reactive agencies are success criteria derived from demonstrable changes in some a priori specified audience. Thus, the need for the measurement specialist evaluator is virtually non-existant.

Maintaining a "distance" of evaluation from production is not particularly important. The possible exception is in the area of needs assessment. Here a needs assessment specialist or market analyst may be employed to provide checks and balances for over zealous product staff. Among the more important management decisions to be served by evaluation in this agency is the need to know the potential markets for given products. Aside from marketing/needs data, it makes little difference if the evaluators are co-opted in the Aggressive Reactive agency. In fact, the overall efficiency of the agency is probably increased if the evaluators become co-opted. Credibility is no issue to management and will appear as an issue only if sponsors or clients exert pressure to see tested products. The evaluator in this agency would either work for or be indistinguishable from the product developers.

The Cautious Proactive R & D Agency: This agency differs from both of the previous two in its commitment to change. It is not satisfied with appeasement of the status quo as a success criterion yet it must precede guardedly in its change strategy. The most likely reason for its caution will be the expectations of sponsors--particularly if they represent federal dollars which must be justified and allocated annually.

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The political atmosphere of the Cautious Proactive agency is such that it consumes much of the time and energies available to the agency. The real danger in this type of agency--which, incidentally is probably best characterized by many of the national University R & D centers and Regional Development laboratories--are that while aspiring to the status of the Aggressive Proactive agency, there are many pressures to move to the Reactive stance. The pressures include annual funding decisions, political priorities, sponsor instabilities, and unrealistic success expectations.

The Cautious Proactive agency is the most vulnerable of the four types because of the inherent discrepancy between its purposes (commitment to change) and its strategy (low autonomy/caution). It must continually attempt to attract and appease sponsors without sacrificing its purposes. This agency operates under a change and development paradigm. It has a set of logically and empirically related principles which represent that portion of the educational system it intends to change. Without such a paradigm, any commitment to educational change is hollow or naive.

This agency is likely to have more full time professional employees than either of the Reactive agencies. Its organizational structure is more pyramidal because of the increased need for specialization of staff and therefore a need for a coordinated division of labor. Its typical product is one which has been a relatively long time in development. Most importantly, in distinguishing it from the Reactive agency, the criteria for product success include the need to demonstrate changes in the knowledges or skills of specified groups.

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This success criterion requires that the evaluation staff have skills in psychometric measurement, market analysis and techniques of formative evaluation. The attention given to summative evaluation is comprehensive and great care is taken to assure that the agency can account for all major activities. Auditable fiscal and performance records are important because of sponsor expectations. Again, because of sponsor uncertainties and anxieties, the formative-summative balance may tip occasionally toward the accountability or summative side at the expense of needs for formative evaluation.

Because this agency has little autonomy, the notion of its commitments to educational change is likely to be modest as operationalized by the instruments designed to measure change. The products are likely to be "internally valid" but are not likely to have undergone thorough evaluations which looked at comparative merit or unintended consequences. Lots of attention is given to criterion referenced testing. But because of the less sophisticated change/development paradigm of this agency in comparison to the Aggressive Proactive agency and because of the anxieties of sponsors, test data will abound in the evaluation reports developed for both internal and external audiences.

"Distance" is important in this type of agency. Because the product developers must empirically demonstrate the worth of their efforts, the responsibility and authority for evaluation must be as independent as possible from the production function. The continuous interface that is necessary between evaluator and developer increases the danger of co-optation. Because of this, it is essential that the evaluator be structurally independent and that he/she be <u>deployed</u> and not <u>assigned</u> to specific R & D efforts. Because the agency has low autonomy,

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the credibility issue is particularly important to sponsors. However, the most important reason for evaluation's relative independence from production is the management commitment to change.

The Aggressive Proactive R & D Agency: For reasons which obviously are a combination of fortitude and fortune, this agency enjoys the highest level of autonomy while still maintaining a management commitment to educational change. It is likely that it is the most mature of the four types and that it has a high quality of leadership and staff. Its organizational structure is well established and closely parallels the paradigm it has evolved for educational R & D. It is likely to be structured according to functions such as "feasibility analysis," "prototype development," field "testing," "dissemination," "evaluation" and so forth. It probably has but a few grants or contracts, each being relatively large. Grants, foundation support or successful "cost-recovery" efforts (obtained perhaps from earlier days as a Cautious Reactive agency) have contributed to its autonomy.

This agency is the most selective about the work it will undertake. Potential efforts will be carefully screened to determine congruence with agency mission and capacity. Very likely, it has struggled through years of "hack" contracts in order to achieve the status that it currently enjoys and protects. This agency represents the highest leverage potential; in large part, it does so because of the confidence is has in its paradigm for change and development. It will address much of its efforts to intermediate-level actors in the educational systems (e.g., administrators, counselors, state or federal leadership, community groups, etc.). But unlike the Cautious Proactive agency, its success criteria do not end with having demonstrated that some impact has been

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made on these intermediate audiences with only the logic and hope that other positive consequences will accrue. Rather, its systemic approach to change and quest for success indicators require that the linkages from intermediate to ultimate audiences (most often classroom learners) be demonstrated empirically. In addition to a requirement that the linkages resulting from leverage strategies be demonstrated, it is likely to seek evidence of comparative worth. In its follow-up evaluations, all consequences (both intended and unintended) will be sought.

These success criteria require a highly diverse and sophisticated evaluation staff. An appreciation and understanding of systemic change requires behavioral scientists and General Systems Theorists; the need for relevant formative evaluation data by which products are revised and improved must be met; and it must have the psychometric and design skills to demonstrate a product's validity for both intermediate and ultimate audiences.

Most evaluation effort is directed to formative data. The summative evaluation strategy is one of maintaining a complete and auditable log of all important decision points during the development process. This audit trail serves the purpose of being accountable to sponsors and consumers at the same time that it provides historical information to product developers which allows them to avoid past mistakes and learn from successes.

Distance must be maintained between evaluation functions and product development functions. The multi-year development efforts require that different evaluation specialists interact with developers over the product's life cycle while still maintaining their structural independence. But again, the most important reason for distance is the agency's need

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and commitment to educational change. It cannot commit itself to a purpose of change without a corresponding commitment to an evaluation function which permits it to determine the extent to which its purposes are being met.

Summary

In brief summary, it has been the purpose of this paper to examine some of the consequences that different managerial options have on the role of evaluation in an educational R & D agency. Although the "evidence" for the hunches and propositions expressed here is experiential and intuitive, it is hoped that this discussion will contribute to what should be a continuing dialogue and study of the role of evaluation. Both education R & D and evaluation now enjoy (and suffer) from "motherhood" and "The Emperor's New Clothes" syndromes. And they will improve only if we ask if and how they are really needed and then look very closely and carefully at what they are up to.